

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Joseph Bergmeister III, <i>et al.</i>	§	
		§	Group Art Unit: 1764
Serial No.	10/775,913	§	
		§	Examiner: Randy Boyer
Filed:	February 10, 2004	§	
		§	Confirmation No.: 1222
For:	ACETYLENE HYDROGENATION CATALYST	§	
	WITH SEGREGATED PALLADIUM SKIN	§	

**DECLARATION UNDER 37 CFR § 1.132**

I, Joseph Bergmeister III, hereby declare that:

1. I am a co-inventor of the invention claimed in the above-identified patent application (the '913 application).
2. I have been advised that the Examiner has relied on U.S. Patent 4,404,124 (the '124 patent) to reject the claims of the '913 application. I have reviewed the '124 patent, and declare that the "pills" described in the '124 patent refer to cylindrical-shaped catalysts and catalyst supports.
3. Table 3 of the '913 application is data from a comparison test between spherical catalysts and cylindrical (pellet) catalysts. For convenience, Table 3 is reproduced below.

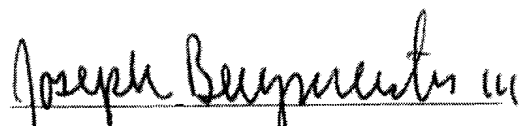
Run #	Catalyst	Shape	Catalyst Charge, g	Pd in Reactor, mg	T <sub>1</sub> , °F	ΔT, °F	Selectivity to C <sub>2</sub> H <sub>4</sub> , %
301 (Control)	D	Pellet	21.63	3.98	105	53	47
302 (Invention)	E	Sphere	14.51	2.61	103	51	56

4. Table 3 illustrates that spherical catalyst supports provide superior selectivity to C<sub>2</sub>H<sub>2</sub> compared to catalyst supports with edges, such as pellets.
5. Table 3 also illustrates that spherical catalyst supports provide superior selectivity to C<sub>2</sub>H<sub>2</sub> despite having a reduced charge and reduced palladium in the reactor.

6. Without wishing to be limited by theory, it is believed that the lack of edges on the spherical catalyst support promote a substantially uniform palladium thickness at the surface of the catalyst. In contrast, it is believed that the edges on the cylindrical catalyst support promote a thicker palladium skin thickness at the edges of the catalyst support, which results in a non-uniform palladium thickness in the catalyst. It is further believed that the uniform palladium thickness is responsible for the superior properties of the spherical catalysts.

7. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine, imprisonment, or both under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Date: 28 JAN 2008



Joseph Bergmeister III  
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